

What is claimed is:

1. A photoconductive encoder wheel, comprising:
 - a grating cogwheel;
 - a sensor;
- 5 two light sources perpendicular to each other; and
 - an incident surface of the grating cogwheel surrounding a protruding surface, and a plurality of protruding wheel parts being divided in equal arc-shapes and surrounding the grating cogwheel for focusing light of a light source by the protruding surface of the grating cogwheel;
- 10 wherein the light is refracted to corresponding protruding wheel parts for focusing again, the light being transmitted to the sensor to generate different phase sequence signals.
2. The photoconductive encoder structure as in claim 1, wherein the grating cogwheel further comprises a disk-shaped housing and a cylinder with a columnar space therein protrudes from a center of the housing.
- 15 3. The photoconductive encoder structure as in claim 1, wherein the grating cogwheel is made of light-transparent materials.
4. The photoconductive encoder structure as in claim 1, wherein the housing of the grating cogwheel includes a refracting space to conduct light focused by the protruding surface to the protruding wheel parts.
- 20 5. The photoconductive encoder structure as in claim 4, wherein the refracting space is set outside the cylinder; a plurality of oblique-cone spaces is located around the circumference of the housing and set concavely in the housing, and an inclined surface is between each oblique-cone space and the housing to refract the light from the light source to the sensor.